CSc Practical Worksheet 5(Solution)

A'S
Paper 1

(a) Topic: Database & SQL & DBMS The bank uses a relational database, `ACCOUNTS`, to store the information about customers and their accounts.

The database stores the customer's first name, last name and date of birth.

The bank has several different types of account. Each account type has a unique ID number, name (for example, regular or saving) and bonus (for example, $5.00, $10.00 or $15.00).

A customer can have more than one account.

Each customer's account has its own ID number and stores the amount of money the customer has in that account.

The bank creates a normalised, relational database to store the required information. There are three tables:

- `CUSTOMER`
- `ACCOUNT_TYPE`
- `CUSTOMER_ACCOUNT`

(i) Write the attributes for each table to complete the database design for the bank.

```
CUSTOMER (CustomerID, FirstName, LastName, DateOfBirth)

ACCOUNT_TYPE (AccountID, Name, Bonus)

CUSTOMER_ACCOUNT (ID, CustomerID, AccountID, Amount)
```

[3]

(ii) Identify the primary key for each table that you designed in **part (d)(i)**.

CUSTOMER: CustomerID
ACCOUNT_TYPE: AccountID
CUSTOMER_ACCOUNT: ID

[2]

(iii) Identify **one** foreign key in one of the tables that you designed in **part (d)(i)**.

Table name : **CUSTOMER_ACCOUNT**

Foreign key: **CustomerID / AccountID**

[1]

(iv) The following table has definitions of database terms.

Write the correct database term in the table for each definition.

Definition	Term
All the data about one entity	**Table / Relation**
The data in one row of a table	**Tuple / Record**
A column or field in a table	**Attribute**

[3]

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